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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/694,175	UEDA, SATOSHI	
	Examiner	Art Unit	
	JACKY X. ZHENG	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 June 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) *2-4,7-9 and 11-15* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 5-6 and 10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *October 28, 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This office action is in response to applicant's amendments and remarks filed on January 23, 2008 and the response to election requirement filed on June 12, 2008.

2. Applicant's election with traverse of Specie IV (corresponding to the fourth aspect disclosed in Specification, Pg. 3, ll 17-24) and indicated by Applicant to be read on claims 5 and 10, is acknowledged. The traversal is on the ground(s) that the Examiner has conducted a through search of the fields of the prior pending claims, and thus there should be no burden. This is respectfully found not persuasive for at least the reasons that: a) some of the claims were amended in the amendments filed on January 23, 2008, and b) the claims 11-15 were newly added and presented for consideration on January 23, 2008, which would require further burden in searches and consideration; and c) lastly in accordance with MPEP §811 (*also see 37 CFR 1.142(a)*) states that a restriction requirement "may be made at any time before final action". In addition, as there is no finality been made prior to the restriction requirement was made; instead, the requirement was made before a final rejection. The requirement is remained proper for at least the reasons set forth above and the ones set forth in the office action mailed on May 14, 2008. As the requirement is deemed proper, the requirement is thus herein made **FINAL**.

3. **Claims 1-2 and 6-7** have been amended (January 23, 2008).

4. **Claims 11-15** have been newly added for consideration (January 23, 2008).

5. **Claims 5 and 10** are elected for consideration (June 12, 2008).

6. **Claims 2-4, 7-9 and 11-15** are withdrawn from consideration as being drawn to the non-elected species.

Note: This application contains claim2-4, 7-9 and 11-15 are drawn to the species nonelected with traverse in the reply filed on June 12, 2008. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

7. The rejections under 35 U.S.C. §112, second paragraph with respect to claims 1-10 are withdrawn in views of Applicant's amendments and/or clarification relating to the claims

Response to Arguments

8. Applicant's arguments filed January 23, 2008 have been fully considered but they are not persuasive.

9. In re Applicant's remarks from Pg. 9, 5th para. to Pg. 13, 2nd para., regarding the rejection made under 35 U.S.C. §103(a) with regard to Claims 5 and 10 (as the arguments relating to claims 2-4, 7-9 and 11-15 are moot as these claims have been withdrawn from consideration as being drawn the non-elected species), Applicant asserts that:

a. Examiner's interpretation is incorrect that the limitation of "*at least a type of image format of image data stored in recording medium, a print size, an' the number of printers*" to be interpreted as either one of the three parameters *(pg. 10, 4th para.)*;

b. Letellier does not suggest to one skilled in the art, that it would be advantageous to consider the processing time while calculating the time required to finish a print job. There is no rationale for modifying the calculation of Tanaka to include the determination

of the processing time disclosed by Letellier; and further alleged that Examiner has relied on impermissible hindsight in formulating this rejection based on Letellier.

c. Letellier does not disclose using the format of the image data as a parameter to compute image generating time; further argued that "the total printing time to computed based on "image generating time", "total number of prints", "printing time per print" and "number of printers" (the 56th paragraph and 57th paragraph) …".

d. Ueda further provides for displaying the calculated time and quality of the print for each individual printer, and *"does not teach or even suggest calculating the number of printers ... Ueda discloses displaying the time it would take for each printer to do the same job"* and *"Ueda does not suggest calculating the number of printers while calculating the time required to accomplish a printing job".*

Applicant's argument(s) are fully and carefully considered, however found to be not persuasive for at least the following reasons.

a. With regard to argument (a) above, Examiner respectfully submits the argument to be moot as the additional interpretation considering the all three parameters has also been addressed *(specifically, Para. 16-18 of previous Office Action)*, and it is acknowledged that the claims have now been amended to clarify computing of a requisite printing time from all three, "a type of image format of image data stored in the recording medium", "a print size" and "a number of printers".

b. With regard to argument (b) above, in response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, Examiner respectfully submits that it must be recognized that any judgment on

obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In addition, the details of discussion have already been set forth in previously Office Action *(i.e. para. 17)*, and also reproduced herein:

> "… However, Letellier discloses an invention relates to methods and apparatus facilitate reductions in time for processing and printing of the image data, particularly discloses "the processing time of preprocessed image page description by the image device is determined … this determination can be based on such things as knowledge of *the actual or expected size of image page description*, knowledge of the actual or expected number and type of image …" *(See Letellier, i.e. Paragraph [0032], Claim 6).*
>
> Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to have modified the teachings of Fukushima et al. and Tanaka to include the limitation of computing a requisite printing time based on "a type of image format of image data" taught by Letellier. It would have been obvious to one of ordinary skill in the art at the time of invention to have modified the teachings of Fukushima et al. and Tanaka by the teachings of Letellier to include the limitation of computing a requisite printing time based on "a type of image format of image data" taught by Letellier, by "tracking how much work has been given to the imaging device to determine how much time the external preprocessing device has available" and "seek to keep both the preprocessing device and the imaging device *utilized to their reasonable capacity" (See Letellier, i.e. Paragraph [0036]).* …"

c. With regard to argument (c) above, in response to Applicant's argument, Examiner respectfully submits that the claims are interpreted in light of the specification;

however limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Applicant is reminded that in order for such limitations to be considered, the claim languages require to *specifically* recite such limitations in the claim, otherwise *broadest reasonable* interpretations of the broadly claimed limitations are deemed to be proper. With respect to the specific claim limitation in argument, claim languages *exactly* recites *"... a computation device which computes a requisite printing time for contents of a print set by the setting device from a type of image format of image data stored in the recording medium, a print size, and a number of printers; and..."*. Examiner reiterates, in Letellier, i.e. para. [0032], discloses *"... the processing time of the preprocessed image page description by the imaging device is determined at 460. This determination can be based on such things as knowledge of the actual or expected size of the image page description, knowledge of the actual or expected number and type of image primitives contained in the image page description and/or knowledge of the actual or expected processing speed of the image device..."*. In addition, in Letellier, i.e. para. [0020], discloses *"the level of rendering, e.g. the number and types f image primitives to e decomposed whether rasterization is included, will affect the preprocessing time by the external device..."*; and further discloses *"... some rendering processes may reduce the transmission time ... one example of such a process would be to apply JPEG, or JPEG2000 image compression to photographic raster images instead of GIF or lossless TIFF compressions method to decrease transmission time"*.

d. With regard to argument (d) above, Examiner respectfully submits, the specific limitation in argument required by the claim, *"... a computation device which computes a requisite printing time for contents of a print set by the setting device from a type of image format of image data stored in the recording medium, a print size, and a number of printers"*, merely requires the limitation of computes a requisite printing time from a number of printers without any further descriptions in how and what with relating to each of the printers from "a number of printers", among the other claim limitations (such as: a type of image format, a print size, which have already been addressed previously). As also indicated and admitted by Applicant *(in "Remarks", pg. 12, 4th para.)*, Ueda discloses a printing system with a plurality of printers, and a calculation means calculates a printing cost for a single printing and printing time necessary for each individual printer to print a job, and further provides for displaying the calculated time and quality of print for each individual printer. Therefore, Examiner respectfully submits that disclosure by Ueda in calculating printing time necessary for each individual printer of a plurality of printers to print a job, will reasonably read on the broadly claimed limitation of computes a requisite printing time from a number of printers based on the broadest reasonable interpretation as the claim has not require any further limitation of the claimed single job to be distributed without any redundancy among the plurality of printers and calculate each printing time at the different printers with respect to the distributed part of the job.

Therefore, for at least the reasons set forth above, the rejection made under 35 U.S.C. §103(a) regard to claims 5 and 10 is remained proper and therefore maintained.

12. In re Applicant's remarks from pg. 13, regarding the rejection made under 35 U.S.C. §103(a) with regard to the claims other than claims 5 and 10. Examiner respectfully submits that as claims 2-4, 7-9 and 11-15 have been withdrawn from consideration as being drawn to the non-elected species, any arguments relating to the claims of such are found to be moot.

(The grounds of rejection and/or objection are maintained for at least the responses set forth above, reasons of record set forth previously, and also replicated and provided in below.)

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

14. **Claims 1, 5-6 and 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Fukushima et al.** (JP 2001-042451) and further in views of **Tanaka** (JP 2001-018497), **Letellier** (U.S. Pub. No. 2004/0012797) and **Ueda et al.** (U.S. Patent No. 7.046, 383).

15. **With regard to claim 1,** the claim is drawn to a digital printing apparatus, comprising: a data reading device which can read image data from plural types of recording media *(See Fukushima et al., i.e. Drawing 1, 31)*; a setting device which sets at least one of the number of prints, types of prints, and a print size *(See Fukushima et al., i.e. Drawing 1, 32)*; a display device which displays contents set by the setting device *(See Fukushima et al., i.e. Drawing 2, 3)*; a printing image data generation device which generates printing image data based on the contents set by the setting device from the image data read by the data reading device *(See*

Fukushima et al., *i.e. Drawing 1,36)*; at least one printer *(See Fukushima et al., i.e. Drawing 1, 33)*; a transfer device which transfers to the printer the printing image data generated by the printing image data generation device *(See Fukushima et al., i.e. Drawing 1, 35; also see Paragraph [0006] for details);* wherein during printing, the computation device detects a printing execution progress, constantly computes remaining requisite printing time, and displays the computed remaining requisite printing time on the display device.

Fukushima et al. do not *explicitly* disclose the limitations of computing a requisite printing time for contents of a print set by the setting device from at least a type of image format of image data stored in the recording medium, a print size, and the number of printers and further displaying the requisite printing time computed on the display device.

However, Tanaka discloses that print processing time per sheet differs, depending (or based on) the paper size and image size *(See Tanaka, i.e. Paragraph [0029])*, further disclose the limitation of displaying the processing time *(See Tanaka, i.e. Paragraph [0029] and Drawing 9)*.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to have modified Fukushima et al. to include the limitation of computing a requisite printing time for contents of a print set by the setting device from a print size and further displaying the requisite printing time computed on the display device taught by Tanaka. It would have been obvious to one of ordinary skill in the art at the time of invention to have modified Fukushima et al. by the teachings of Tanaka to include the limitation of computing a requisite printing time for contents of a print set by the setting device from a print size and further displaying the requisite printing time computed on the display device taught by Tanaka to

increase the accuracy of processing time calculation and presenting a clear status on a display to user with relating to the processing time.

Fukushima et al. and Tanaka do not *explicitly* disclose the limitation of computing a requisite printing time based on "a type of image format of image data".

However, Letellier discloses an invention relates to methods and apparatus facilitate reductions in time for processing and printing of the image data, particularly discloses "the processing time of preprocessed image page description by the image device is determined … this determination can be based on such things as knowledge of *the actual or expected size of image page description*, knowledge of the actual or expected number and type of image …" *(See Letellier, i.e. Paragraph [0032], Claim 6).*

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to have modified the teachings of Fukushima et al. and Tanaka to include the limitation of computing a requisite printing time based on "a type of image format of image data" taught by Letellier. It would have been obvious to one of ordinary skill in the art at the time of invention to have modified the teachings of Fukushima et al. and Tanaka by the teachings of Letellier to include the limitation of computing a requisite printing time based on "a type of image format of image data" taught by Letellier, by "tracking how much work has been given to the imaging device to determine how much time the external preprocessing device has available" and "seek to keep both the preprocessing device and the imaging device *utilized to their reasonable capacity" (See Letellier, i.e. Paragraph [0036]).*

Fukushima et al., Tanaka and Letellier do not *explicitly* disclose the limitation of computing a requisite printing time based on "the number of printers".

However, Ueda et al. discloses a printing system including a plurality of different kind of printers and a printer selecting device, further particularly disclose the limitation of "calculating mean, calculate for each printers, a print cost for a single printing and a printing time necessary for the printer to produce the number of printings…" and display the "additional information" on the display *(see Ueda et al., i.e. column 8, lines 19-26).*

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to have modified the teachings of Fukushima et al., Tanaka and Letellier to include the limitation of computing a requisite printing time based on "the number of printers" taught by Ueda et al. It would have been obvious to one of ordinary skill in the art at the time of invention to have modified the teachings of Fukushima et al., Tanaka and Letellier by the teachings of Letellier to include the limitation of computing a requisite printing time based on " the number of printers" taught by Ueda et a., so "the system including different kinds of printers allows the operator to select desired one of the printers and thereby makes the most of the advantage of the printer"*(See Ueda et al. i.e. column 1, lines 34-40).*

16. **With regard to claim 5**, Tanaka discloses "a system controller computes the residual time to the end of the printing, which subtract actual printing job time from the printing office important time computed…" and "display it on the predetermined region on a display" *(See Tanaka, i.e. Paragraph [0030]).*

17. **With regard to claim 6,** the claim is drawn to a digital printing apparatus, comprising *substantial identical* limitations recited and discussed as in claim 1, further requiring "a printer selection device which selects an available printer from among the plurality of printers". Fukushima et al. disclose "a printer change mean" for choosing the printer used from two or more printers based on the information set up with the printer change mean *(See Fukushima et al. i.e. Paragraph [0006]).* Additionally, Ueda et al. also disclose "a printer selecting device" *(i.e. Figure 2, Part 21),* comprising "a selecting mean" *(Figure 2, Part 24)* for selecting the printers.

18. **With regard to claim 10,** the claim is drawn to a digital printing apparatus, comprising *substantial identical* limitations recited and discussed as in claim 5 *(The claim is rejected under the same ground for at least the reasons set forth above. See the detailed discussion of the claim 5 above).*

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A. Ushio et al. (U.S. Pub. No. 2003/0059223, Pat. No. 6,728,499) disclose an image forming apparatus with left (or remaining) time informing function and left time calculating method.

B. Ushio et al. (U.S. Patent No. 6,728,499) disclose an image forming apparatus with left

C. Gotoh et al. (U.S. Patent No. 6,709,176) disclose an invention relates to calculation of printing time and displaying in time scale.

D. Inui et al. (U.S. Patent No. 5,809,371) disclose an image forming apparatus displaying job end time (i.e. Figure 10a, b).

E. Ishiyama (U.S. Patent No. 6,186,682) discloses a printing system that can predict the time it will take to print a document using various formats and pick the optimum printing path.

F. Mitani (U.S. Patent No. 6,124,943) discloses calculating rendering time, selected based on the type of intermediate data.

G. Filion et al. (U.S. Patent No. 5,036,361) disclose a job requirements calculation and display.

H. Yamamoto (U.S. Patent No. 6,636,324) discloses an image processing method and apparatus, particularly calculation of processing time.

I. Osawa et al. (U.S. Patent No. 6,652,819) disclose an image processing apparatus and method, particularly "an analyzer" estimate the rendering time based on the number, type of the rendering commands stored in the intermediate memory.

J. Shibaki et al. (U.S. Patent No. 5,960,234) disclose a time distance display apparatus for image forming apparatus.

20. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

21. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacky X. Zheng whose telephone number is (571) 270-1122. The examiner can *normally* be reached on Monday-Friday, 7:30 a.m.-5p.m., Alt. Friday Off.

23. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler M. Lamb can be reached on (571) 272-7406. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

24. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jacky X. Zheng/
Examiner, Art Unit: 2625
September 12, 2008

/King Y. Poon/
Supervisory Patent Examiner, Art Unit 2625